

Philosophy 2101 - Introduction to Symbolic Logic

Section 1 - MWF 10:30am to 11:35am Sci 4655

Section 2 - MWF 11:45am to 12:50pm Sci 4655

Lory Lemke Fall 2007

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Office Hrs: MWF 9:30am to 10:20am; TTH 10:00am to 11:00am; and by appt.

Text: P. Hurley, *A Concise Introduction To Logic*, 9<sup>th</sup> Ed. (see specific chapter and section numbers)

The italicized titles are extra readings found on the web at

<http://www.morris.umn.edu/academic/philosophy/Lemke/Logic%20Course%20Description.htm>

8.29 introductions, service learning info

8.31 2.1 (cognitive vs. emotive meaning)

9.3 **Labor Day Holiday**

9.5 1.1 (premises vs. conclusions), service learning scheduling

9.7 **HW**, *A Definition of Logic*

9.10 **First Service Learning Visit (week 3): arguments**

1.4 (validity vs. soundness), 1.5 (two proofs of invalidity)

9.12 1.6 (extended arguments)

9.14 **HW**, *Metaphysics of Meaning I: Propositions*

9.17 Discussion of first paper topic: Lucretius on the nature of space.

9.19 **Exam 1**

9.21 4.1 & 4.2 (categorical propositions), 2.2 (intensional vs. extensional meaning)

9.24 4.3 (Boolean logic), 4.4 (valid operations)

9.26 4.6 (Aristotelian logic with existential import)

9.28 **HW**, *Set Theory and Russell's Paradox*

10.1 **Second Service Learning Visit (week 6): venns**

4.7 (translations)

10.3 5.1 (categorical syllogism)

10.5 **HW**, 5.2 (Venns)

10.8 **First Paper Due**

5.4 (reducing terms), 5.5 (translations)

10.10 5.6 (enthymemes), 5.7 (sorites)

10.12 **HW**, *Logic and Skepticism*

10.15 Discussion of Second Paper Topic: Augustine on the nature of time.

10.17 Review

10.19 **Exam 2**

10.22 **Fall Break**

10.24 6.1 (translating propositional logic)

10.26 **HW**, 6.2 (truth functions)

- 10.29 **Third Service Learning Visit (week 9): conditionals**  
6.3 & 6.4 (truth tables)
- 10.31 6.5 (indirect truth tables)
- 11.2 **HW**, *Metaphysics of Meaning II: Ideas*
  
- 11.5 **Second Paper Due**  
6.6 (argument forms), 7.1 & 7.2 (rules of implication)
- 11.7 7.3 (rules of replacement)
- 11.9 **HW**, 7.4 (rules of replacement)
  
- 11.12 **Fourth Service Learning Visit (week 11): proofs**  
7.5 (conditional proofs)
- 11.14 7.6 (indirect proofs)
- 11.16 **HW**, 7.7 (logical truths)
  
- 11.19 *Metaphysics of Meaning III: Practices*
- 11.21 **Exam 3**
- 11.23 **Thanksgiving Break**
  
- 11.26 8.1 (translating predicate logic)
- 11.28 8.2 (quantifier inference rules)
- 11.30 **HW**, 8.3 (quantifier change rule)
  
- 12.3 **Fifth Service Learning Visit (week 15): quantifiers**  
Discussion of Third Paper Topic: yet to be determined
- 12.5 8.4 (conditional and indirect proof)
- 12.7 **HW**, *Logical Truth and Necessity*
  
- 12.10 *Empiricism: Hempel and Quine*
- 12.12 8.5 (proving invalidity)
- 12.14 Review
  
- 12.18 (Tuesday) Section A **Final 4pm to 6pm and Third Paper Due**
- 12.19 (Wednesday) Section B **Final 4pm to 6pm and Third Paper Due**

Our text is mainly a handbook of how to do logic and it is a very good one. Its aim is practical in demonstrating various methods for evaluating deductive arguments. I will add extra readings, which are on the web, concerning the philosophy of logic, language, metaphysics, and epistemology in order to give you a broader introductory course in philosophy. Our tests will be 70% logic exercises from the text and 30% theory from class lecture. The final is comprehensive.

Homework will be due almost every Friday, except when there is an exam. It will be graded and returned on Monday. I believe that how you do on the homework is the best

indicator of how well you will do on the exams (since, the exams will contain exactly the same type of logical problems as are in the homework). Our T.A. will be grading the homework and because of the time consuming nature of grading homework for about 50 students, no late homework will be accepted.

Papers will be exercises in extracting arguments. This is a key skill in any area but particularly in philosophy, because it is really the only way you can learn philosophy from an original text. For each paper assignment, I will give you anywhere from a brief passage to several pages from a well-known philosopher. Each paper should begin with a brief introduction outlining the philosopher's main view and its significance, as well as a brief description of what you will do in the paper. The main body should specify the philosopher's argument (premises and conclusion). Please also indicate where in the text you believe the argument comes from. You should then offer your own evaluation of the argument by giving reasons for the truth or falsity of the premises and the validity of the argument. Conclude your paper with a brief summary of what you have accomplished.

We will also have a service learning component. The purpose of this part of the course is to reinforce the logic you have learned, develop oral communication skills, have fun with elementary school age kids, and provide a service to the community. You will need to make five visits to the Morris Area Elementary School on assigned weeks outside of class time. On September 5<sup>th</sup>, you need to commit to a schedule of visits. I will also observe at least one of your lessons during the course of the semester. For each visit you will be given a lesson plan outline. After your visit, you will need to write a brief one page evaluation of how your session went and hand it in to me. After the final visit, write a longer two page summary of your teaching experience.

Class grades will be determined by four tests, three philosophical papers, your service learning reports, and homework. The last test will be a final during finals week and cover material over the last part of the course as well as a comprehensive exam over all the material in the course. Your course grade will be determined by giving 10% to the first exam, 15% to the second and third exam, 20% to the fourth exam (which includes the final), 5% for the first paper, and 10% for the remaining two papers, 10% for the service learning project, and 5% for the homework.

### **University of Minnesota Policies:**

#### **Grading standards (definition of grades):**

A: represents outstanding achievement relative to the course requirements.

B: represents achievement significantly above the course requirements.

C: represents achievement meeting the course requirements in every respect.

D: represents achievement worthy of credit, but failing to meet all course requirements.

S: represents satisfactory achievement, which is equivalent to a C- or better.

F (or N): represents failure (or no credit) because the work was either (1) completed but not worthy of credit or (2) not completed and no incomplete was given.

I (Incomplete): assigned at the discretion of the instructor when, due to extraordinary circumstances, e.g., hospitalization, a student is prevented from completing the work of the course on time. This requires a written agreement between instructor and student.

**Make-up exam policy:**

Make-up exams are available only if a student has an excellent reason and arrangements are made either before the missed exam or as quickly as humanly possible thereafter.

**Senate student academic workload policy:**

For undergraduate courses, as one credit is defined as equivalent to an average of three hours of “learning effort” per week necessary for an average student to achieve an average grade (C) in the course, you should expect in this four credit course to spend an additional eight hours a week on course work outside the classroom.

**Statement on accommodations for students with disabilities:**

Please contact the Disability Services Office, 589-6163, Room 362 Briggs Library to discuss and arrange for accommodation needs.

**Statement on classroom conduct:**

Students are expected to interact with the instructor and other students with respect and courtesy. Students should attend every class session prepared to learn and work. Participation in class is expected, which includes both speaking up and listening. Give class your full attention while here. Complete all assignments including the reading in a timely fashion. Do not use cell phones or recording equipment to class without the instructor's consent. Students whose behavior is disruptive either to the instructor or to other students will be asked to leave. Students whose behavior suggests the need for counseling or other assistance may be referred to counseling services. Students whose behavior violates the University Student Conduct Code will be subject to disciplinary action.

**Statement on academic misconduct:**

Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. In this course, a student responsible for scholastic dishonesty can be assigned a penalty up to and including an "F" or "N" for the course. If you have any questions regarding the expectations for a specific assignment or exam, ask.

**Statement regarding sexual harassment:**

University policy prohibits sexual harassment as defined by the University of Minnesota Regents' policy:

<http://www1.umn.edu/regents/policies/humanresources/SexHarassment.pdf>